The world has changed significantly over the last century, however many learning environments remain unchanged. With the technology available today, learning and teaching can happen anywhere, anytime, with anyone. Many of the traditional methods of learning and teaching are rapidly becoming outmoded and potentially obsolete. Higher education is entering new territory, where the worlds of learning spaces and learning technologies are meeting to provide students with transformative learning and collaboration experiences. Through integrating the design of new learning spaces, learning technologies and pedagogical approaches together, new types of learning environments are emerging.

Today's students expect a high quality learning experience supported by the latest technology, and universities are increasingly under pressure to deliver this on a tight budget and in a very competitive market. There is an increasing need for growing classes to be simultaneously timetabled across several different physical locations. In addition, there is a growing demand for online delivery of content and courses, in order to provide students with more flexible learning options. While this does present various technical challenges, it also allows opportunities for innovative technology and pedagogical solutions. With the help of such technology, we are moving towards a new learning modality, where students are less reliant on formal teacher centred spaces, but are instead supported by more informal, learner centred collaborative spaces. Using case study methodology, this presentation will demonstrate how good collaboration spaces are designed with technology in mind and enable students to take full advantage of new technology whilst enjoying the on-campus experience. The principles of good learning space design will also be explored, considering both technical and pedagogical factors.

In this new territory where learning spaces meet with learning technologies, emerging information technology and audio visual technology solutions can be used innovative combinations to enhance teaching, learning and collaboration activities. This presentation will explore various technology solutions, including wireless presentation software, classroom screen sharing systems, mobile devices including smartphones and tablets, remote teaching presence, interactive surfaces and natural user interfaces. An emphasis will be placed on selecting solutions with genuine potential to enhance teaching, learning and collaboration activities, with an understanding of typical financial constraints within higher education.

Effective learning space solutions can be achieved from a collaborative design approach with technologists, architects and academics working together, to ensure that the appropriate technology is integrated in the early stages of design, rather than added later. This innovative approach will help universities move beyond using new technology to deliver old content, towards a real transformation in learning and teaching. Several ideas on how to achieve this interdisciplinary integration of design will be presented. In addition, the importance of supporting academics and teaching staff as they adopt these changes, by offering various solutions including test facilities, training options and dedicated technical support, is explored. Looking forward, there are a number of emerging technologies that may impact future learning, teaching and collaboration spaces. By anticipating what is on the horizon, technologists can provide a valuable contribution to the collaborative design of new spaces that will support future technology and improve learning, teaching and the overall student experience.